

CLAIMS

1. A device for positioning a plate [2] comprising one or more samples on an observation or analysis device comprising an observation or analysis lens [3] of at least part of a sample along an observation axis from an observation face [2b] of the plate [2] and a chassis [11] having a support assembly [20] for the plate [2], wherein this support assembly [20] comprises:
 - a first movable frame [21] sliding in a plane perpendicular to the observation axis;
 - a second movable frame [22] supported by the first frame [21] sliding in said plane perpendicular to the observation axis, the first and second frames [21 and 22] being movable in a direction perpendicular to the direction in which other frame moves, and
 - a third frame [23] supported by the second frame [22] by means [30] used to maintain the third frame [23] blocking said third frame [23] in the plane perpendicular to the observation axis, while leaving the third frame [23] free to move essentially along the observation axis, said third frame [23] presenting means [31 and 33] to immobilise the plate [2].
2. A device according to claim 1, wherein it comprises means (35a, 35b; 36a, 36b) used to immobilise the third frame [23] in the vertical position for placing the analysis plate [2].
3. A device according to claim 1 or claim 2, wherein it includes means [40] of controlling the vertical position of the observation face [2b] of the plate [2] with respect to the observation lens [3].
4. A device according to any one of claims 1 to 3, wherein the means used to maintain the third plate [23] comprise at least one thin spring plate [30a, 30b] forming a pivot, preferably located in the observation plane, said spring plate [30a, 30b] being connected respectively to the second [22] and third frame [23].
5. A device according to any one of claims 1 to 3, wherein the means used to hold the third frame [23] comprise on one hand a hinge pin located between the second and third frames [22, 23] preferably extending perpendicular to the motion direction of the second frame [22] and on the other

hand at least one torsional spring located between said second and third frames [22, 23].

6. A device according to any one of the preceding claims, wherein the means used to immobilise the plate [2] are comprised by supporting shoes 5 [31] arranged around the inner periphery of the third frame [23] and a cam [33] mounted on the third frame [23] which can be pivoted between a retracted position and a projecting position inside the third frame [23] so as to immobilise the plate [2].

7. A device according to claim 6, wherein the cam comprises a 10 screw whose head or tip can rest on the base of the plate.

8. A device according to claim 6 or 7, wherein part of the shoes comprises a recess intended for taking the base of the plate.

9. A device according to any one of the preceding claims, wherein the means used to immobilise the third frame are comprised by two opposing 15 limit stops [35a and 35b], each mounted on one side of the first frame [21] extending parallel to the motion direction of the second frame [22] and by two opposing ties [36a and 36b] each fixed perpendicular to one side of the third frame [23] extending parallel to said direction, with each limit stop [35a, 35b] comprising an inclined face designed to work in conjunction with the free end of 20 the corresponding tie [36a/36b] when the second and third frames [22 and 23] move in this direction.

10. A device according to claim 3, wherein the means of control are comprised by a strut [40] fixed with respect to the observation lens [3] and having a bearing area of the observation face [2b] of the plate [2].

25 11. A device according to claim 3, wherein the means of control are comprised by a magnetic or piezoelectric lift system for the plate [2].

12. A device according to any one of the preceding claims, wherein the motions of the first and second frames [21 and 22] are motorised.

30 13. A sample observation or analysis device, wherein it comprises a positioning device for a plate according to one of claims 1 to 12, a light source for a least part of a sample and image acquisition means.

14. A device according to claim 13, wherein the light source is a lamp, a laser or an array of electroluminescent diodes.